

1095-37-154

Mauricio A. Rivas* (e1_mauricio_alex@yahoo.com), University of Houston, Department of Mathematics, Houston, TX 77204-3008, and **William Ott**. *Observing Differentiable Dynamical Systems on Infinite-Dimensional Hilbert Spaces*.

We study the extent to which inferences about differentiable infinite-dimensional dynamical systems follow from examining observations of such systems. Let H be a separable infinite-dimensional real Hilbert space, $f : H \rightarrow H$ a map and A a compact subset of H such that $f(A) = A$. We prove that for almost every (in the sense of prevalence) continuously differentiable observation map $\phi : H \rightarrow \mathbb{R}^m$, the existence of a quasi-differentiable map $\psi : \phi(A) \rightarrow \phi(A)$ implies that ϕ is an injective immersion on A . (Received September 08, 2013)